



# THE EFFECTS OF CREDIT RISK, OPERATIONAL RISK AND LIQUIDITY RISK ON THE FINANCIAL PERFORMANCE OF INSURANCE COMPANIES LISTED AT KUWAIT STOCK EXCHANGE

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## Abstract:

This aim of this study to shed some light of the effect of risk factors on the financial performance of insurance companies listed at Kuwait stock exchange (KSE) over the period 2009-2017. The research uses credit, operational and liquidity risk as independent variables and return on assets (ROA) and return on equity (ROE) as dependent variables. Results obtained from this study showed that the financial performance of Kuwaiti insurance companies are mostly affected by operational risk and credit risk while liquidity risk does not have any statistical significant effect on their financial performance.

**JEL:** L10; L25; G32; G22

**Keywords:** insurance companies, Kuwait stock exchange, operational risk, credit risk, liquidity risk, return on assets, return on equity, financial performance

## 1. Introduction

The insurance industry is crucial component in any economy since to works as a safety net against any unfavorable incidences. Insurance is a form of risk management where it is used to transfer risk from one entity to another, for premium, to hedge against any risk of unexpected loss. As a result, the insurance sector is becoming important part of the

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financial sector, and Kuwait is no exception. The insurance industry is an essential part of any financial system of any country and the successful operation of the insurance sector can energize other industries and general economic development. Naveed et al (2011) showed that the efficiency of the insurance sector in transferring risk can affect economic growth while at the same time weak insurance sector can result in systemic crises which have unfavorable consequences for the economy as a whole. Beck and Webb (2003) stated that the performance of the insurance sector in any country has a significant effect on the economic performance of that country. The financial soundness of the insurance industry can best be measured by its profitability, Koller (2011) argued that profitability is the most important and reliable indicator to measure the financial soundness of insurance companies. While Malik (2011) states that profitability is one of the main determinants of the performance of a company.

Risk and its impact on insurance companies' performance is very important to the insurance industry. In running their operations, insurance companies are exposed to risks. Risk is one of the factors that affects the efficiency of any insurance company (Van Greuning and Brajovic-Bratanovic, 2009). In addition, insurance companies face several risks in their operation such as operational risk, credit risk, and liquidity risk. All these risks will affect the efficiency of the insurance sector. According to Abu Hussain and Al-Ajmi (2012), the most important risks facing any financial institution are operational risk, credit risk, and liquidity risk.

Risk management is defined as *"the process of identifying, assessing, and prioritizing risks of different kinds"*. Based on this definition, insurance companies should acknowledge the requirement in order to manage the financial, hazard, operational and also strategic risks affecting their companies. Besides that, insurance companies need to align their activities so that they can closely meet the objectives of the enterprise and risk appetite (Zeitun & Benjelloun, 2013). According to Elbahar (2016) there is strong relation between risk management and the financial performance of any company. Operational risk, credit risk and liquidity risk are considered as the most important risks proxies' insurance sector can face (Tandelilin et al., 2007).

### **1.1. Operational risk**

Operational risk is asymmetric, and it impacts the losses or gains of insurance companies. Operational risk is due to inadequacy and / or malfunction of internal processes, human error, system failure, and / or any external event affecting insurance company operations. Froot (2007) argued that by managing operational risk, future projected cash flows can be maximized by insurance companies through the reduction of the projected costs of operational loss events and thus will increase the company performance. It is important for insurance companies' management to manage the operational losses because customers are becoming more conscious about the insolvency risk. Many researchers such as Cummins et al. (2006) and Merton and Perold (1993) concluded in their researcher that there is an inverse relation between insolvency risk and financial performance. Managing the operational risk can be done through minimizing their expenses and

maximizing their revenues. The higher the operating cost, the smaller the company profitability is, and for that insurance companies' management must be able to control the operating cost (Sutrisno, 2016). Many researchers such as Tafti et al. (2013), Aruwa and Musa (2014) and many others found a significant negative relation between operational risk and financial performance.

### **1.2. Credit risk**

Credit risk is known as the risk of default on a debt that may arise from a borrower failing to make required payments. Credit risk is defined as the probability of a loss triggered by the default of a debtor (Hertrich, 2015). Credit risk is the result of three subgroups of risks, namely exposure risk, recovery risk, and default risk (Bessis, 1999). Hakim and Neamie (2001) examined the relationship between credit risk and financial performance of banks in Egypt and Lebanon over the period of six years from 1993 to 1999. They concluded that there was a positive relationship between credit variable and profitability. On the other hand, Miller and Noulas (1997) examined the relation between credit risk and profitability and revealed that there was significant and negative relationship. Sayedi (2014) also found negative relationship between credit risk and profitability but it was insignificant. Jiang et al. (2012) found that financial institutions with higher credit risks can be considered as less efficient.

### **1.3. Liquidity risk**

Liquidity risk can be gauged by current liabilities to current assets ratio. Financial managers in insurance companies should take into account unexpected financial obligations that might arise. Any default in honoring any financial obligation would cause the company dearly since it would affect its financials and reputation. This risk primarily springs from asset structure and debts and the main cause of it is the mismatch between inflow and outflows (Crouhy et al., 2000). Tabari et al. (2013) found that the relationship between liquidity risk and financial performance is significant and negative and concluded that liquidity risk will trigger a deterioration in the financial performance of any financial institution. Al-Tamimi et al. (2015) also found a significant negative relationship between liquidity risk and financial performance. Elviani (2012) concluded that liquidity risk has an effect on profitability. On the other hand, Jiang et al. (2012) highlighted a positive and significant coefficient on liquidity risk. Whereas Hakim and Neamie (2001) concluded that the liquidity variable is insignificant across all banks and possess zero impact on profitability. Syaharman (2012) also concluded that liquidity risk had no effect on profitability.

## **2. Methodology**

The aim of this study is to measure the effect of risk factors on the profitability of Kuwaiti insurance companies. Following Aruwa and Musa (2014), return on assets (ROA) and return on equity (ROE) are used as financial performance proxies and operational risk

(OR), credit risk (CR), and liquidity risk (LR) are used as risk proxies as shown in equations 1 and 2;

$$ROA = \alpha + \beta_1 OR + \beta_2 CR + \beta_3 LR + \varepsilon \quad (1)$$

$$ROE = \alpha + \beta_1 OR + \beta_2 CR + \beta_3 LR + \varepsilon \quad (2)$$

Where,

ROA = Return on asset ratio, net income divided by total assets.

ROE = Return on equity ratio, net income divided by shareholders equity.

OR = Operational risk, total expenses divided by total revenue.

CR = Credit risk, total debt divided by total assets.

LR = Liquidity risk, current liabilities divided by current assets.

$\beta_1, \beta_2, \beta_3$  are the coefficients of variables.

$\alpha$  = Constant.

$\varepsilon$  = Error term.

Equations 1 and 2 are set to examine the following hypotheses,

**H<sub>01</sub>:** There is no statistical significant relation between operational risk and financial performance.

**H<sub>02</sub>:** There is no statistical significant relation between credit risk and financial performance.

**H<sub>03</sub>:** There is no statistical significant relation between liquidity risk and financial performance.

### 3. Data and Empirical Results

The results of this research are based on panel data that was collected from the annual reports of Kuwaiti insurance companies over the period 2009-2017. The data were collected from Kuwaiti stock exchange and Kuwaiti institute of banking studies websites. Diagnostic tests are set to support the validity of the regression results. The model used in this research is based on financial ratios, and according to Wadhwa (2019) normality has been proved to be absent when the pattern of ratios was analyzed. In order to examine the normality of the data, examination of skewness (symmetry of the distribution) and kurtosis (sharpness of the peak of a frequency-distribution curve) are required. According to Klein (1998) who stated that for data to be normally distributed, skewness value should be less than  $\pm 3$  and kurtosis should not exceed  $\pm 10$ . By looking at the descriptive analysis in Table 1, it can be seen that the data is normally distributed.

**Table 1: Descriptive Analysis**

	ROA	ROE	OR	CR	LR
Mean	2.905	7.238	0.745	0.601	0.311
Standard Deviation	2.357	6.250	0.192	0.121	0.102
Kurtosis	3.888	4.631	2.630	-1.527	-0.850
Skewness	-1.628	-1.799	1.233	-0.239	-0.269
Range	11.565	31.895	0.891	0.386	0.367
Minimum	-5.532	-16.167	0.465	0.401	0.092
Maximum	6.033	15.728	1.357	0.786	0.458
Count	36	36	36	36	36

The correlation analysis measures the strength and the nature of the relation between variables where it takes a value between -1 and 1. The correlation analysis can also be used to identify any multicollinearity in the data. Multicollinearity can cause unrealistically high standard error estimates of regression coefficients and in the end can cause false conclusion about the significance of independent variables in the model being evaluated. In this research, a threshold of 0.70 is used to identify multicollinearity. Using Pearson correlation matrix in Table 2, it can be seen that such problem does not exist.

**Table 2: Pearson Correlation Matrix**

	ROA	ROE	OR	CR	LR
ROA	1				
ROE	0.901	1			
OR	-0.658	-0.688	1		
CR	-0.179	0.169	0.318	1	
LR	-0.196	0.129	0.288	0.823	1

As shown in Table 3, both models showed significant *F* that is less the 0.01 indicating that they can be labeled as a good fit. The risk factors were able to explain 93.1% of the variation in ROA and 80.1% of the variation in ROE. Operational risk showed statistically significant inverse relation with insurance companies' financial performance which is in line with Tafti et al. (2013), Aruwa and Musa (2014) findings. The finding is logical since minimizing the expenses would result in a higher return on assets and equity.

**Table 3: OLS Regression Results**

Model 1: Return on Assets (ROA)				Model 2: Return on Equity (ROE)			
R square	0.937	Sig F	2.625E-19	R square	0.818	Sig F	5.948E-12
Adjusted R Square	0.931			Adjusted R Square	0.801		
	<b>Coefficient</b>	<b>t Stat</b>	<b>P-value</b>		<b>Coefficient</b>	<b>t Stat</b>	<b>P-value</b>
Intercept	10.271	16.525	3.16E-17	Intercept	15.801	5.637	3.11E-06
OR	-12.312	-21.388	1.61E-20	OR	-30.608	-11.789	3.49E-13
CR	3.834	2.494	0.018	CR	22.266	3.212	0.003
LR	-1.591	-0.885	0.383	LR	2.787	0.344	0.733

In terms of credit risk, results from this research shows that there is a statistically significant direct relation between credit risk and the financial performance of Kuwaiti insurance companies which contradicts Miller and Noulas (1997) findings that there is a statistically significant negative relation between credit risk and the financial performance. This indicates that Kuwaiti insurance companies are utilizing their debts efficiently. Liquidity risk showed mixed results since it showed and negative effect on return on assets (ROA), it also showed a positive relation with return on equity (ROE) but both were statistically insignificant. These results agree with Hakim and Neamie (2001) results that liquidity risk is insignificant and possess zero impact on profitability.

#### 4. Conclusion

The aim of this study is to examine the effect of risk factors on the financial performance of Kuwaiti insurance companies listed at Kuwait stock exchange over the period 2009-2017. The results of the research revealed that operational risk and credit risk had a statistically significant effect on the financial performance of Kuwaiti insurance companies while liquidity risk did not have any statistical significance on the financial performance. Operational risk showed a negative relation while credit risk had a positive effect on the financial performance. On the other hand, liquidity risk showed mixed results where it had a negative effect on return on assets and a positive effect on return on equity.

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